

**NHPUC December 2008 Ice Storm Review
Unitil Energy Systems, Inc.- Set 1**

**Witness: Raymond A. Letourneau, Jr.
February 27, 2009**

Staff 1-21: Please provide the timeframes in which mutual aid companies confirmed that crews were available and line crews actually began working in the field on the distribution /transmission system (include travel time, quartering time, training time and other time periods that are required before start time). Please provide breakdowns by company and crew.

Response:

Time confirmed is estimated.

Company	Number of Line Crews	Date/Time Confirmed	Date/Time Arrived
HiVolt Electric	2	Dec 11/2300	Dec 12/0000
I.C. Reed	3	Dec 11/2300	Dec 12/0600
I.C. Reed	1	Dec 12/1200	Dec 13/0700
I.C. Reed	1	Dec 12/1200	Dec 15/0700
I.C. Reed	1	Dec 12/1200	Dec 21/0700
J.C. Reed	2	Dec 12/2000	Dec 13/0900
Service Electric	16	Dec 14/0800	Dec 16/1200
Service Electric	10	Dec 14/0800	Dec 16/1300
New Brunswick Power	2	Dec 17/1700	Dec 18/0600
Carr & Duff (via National Grid)	7	Dec 19/2000	Dec 20/0630
NH Electric Cooperative	3	Dec 20/2000	Dec 21/0630

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Staff 1-22: Please provide the total number of crews available for each day of the December 2008 ice storm starting on December 11 and ending on the last day of restoration. Please break out the crews by line service crews, bucket crews, tree trimming crews and digger crews and other (describe). Please indicate whether the crews were the company's own crews, those of an affiliate or an outside contract crew.

Response:

Date	Unitil Bucket Crews	Outside Bucket Crews	Tree Crews	Outside Digger Crew	Other Outside Crews	Total Crews
Dec. 11	11	8	4	0	0	23
Dec. 12	11	5	4	0	0	20
Dec. 13	11	6	5	2	0	24
Dec. 14	11	6	20	2	0	39
Dec. 15	11	7	20	1	0	39
Dec. 16	11	37	20	6	0	74
Dec. 17	11	37	20	6	0	74
Dec. 18	11	35	20	10	0	76
Dec. 19	11	35	20	10	0	76
Dec. 20	11	42	20	10	0	83
Dec. 21	11	44	15	10	2 ¹	82
Dec. 22	9	18	5	0	2	34
Dec. 23	9	6	5	0	0	20

¹ Off road bucket and off-road digger

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Staff 1-23: Please describe any difficulties encountered in providing for hotel and meal accommodations for restoration workers when the public is competing for the same facilities due to power outages.

Response:

Unitil encountered little to no difficulties in providing or obtaining hotel rooms and meal accommodations during the storm.

At one point in the storm we anticipated a problem with hotel rooms in the Concord area. However, the Department of Homeland Security made some rooms available to Unitil at their facility.

The restaurants that were open were very busy. Unitil therefore obtained and delivered box lunches in the field. In addition, other hot meals were provided by catering services and served at the company's operating centers. Please see the response to Staff 1-24.

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Staff 1-24: Please describe methods used to keep crews fed during restoration efforts so as to maximize restoration work hours. Are box meals used for lunches, breakfasts, dinners in an effort to limit the travel time needed to go to area restaurants?

Response:

At the initial onset of the storm, box lunches were made available for all onsite/assigned crews and field personnel. In addition, on occasion food and beverages were brought into the field by support personnel.

As more outside resources began to arrive, breakfast was provided at the local operating center to allow crews to begin work immediately after being assigned to the field. Several local restaurants also provided hot meals (primarily dinners) for crews and were utilized by the local field supervisors at their discretion based on working conditions and requirements. We also attempted to coordinate crew arrival times with various restaurants to ensure quick seating where possible.

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Staff 1-25: Please indicate when the company considers the last customer restored associated with the December 2008 ice storm

Response:

Approximately noontime on December 23, 2008.

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Staff 1-26: Did the company differentiate the ice storm from the weather events that occurred on December 17, December 19, and December 21, or are the outage numbers and restoration numbers reported inclusive?

Response:

All the outage and restoration information is inclusive of these events.

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**Witness: Raymond A. Letourneau, Jr.
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Staff 1-27: Please provide the number of damage assessment personnel used by your company during the December 2008 ice storm. Please provide their names and a description of their experience in assessing damage.

Response:

There were a total of 33 personnel performing damage assessment during the December 2008 Ice Storm. The table below provides the names of personnel and their experience in assessing damage. Experience ratings are defined as follows:

- 1 Very experienced: 4 or more storms assessing damage
- 2 Moderate experience: 2 to 3 storms assessing damage
- 3 Little experience: 0 to 1 storm assessing damage

Name	Experience Level
Peter Miller	1
Bob McNeff	1
Tom Clark	1
Ed Boisvert	1
George Smith	1
Mike Deschambeault	1
John Folland	1
Jason Kearns	3
Skip Zogopoulos	1
Bob Carpenter	1
Seth Carr	1
Peter Clark	1
Don Phillips	1
Charles Kickham	2
Jode Lennon	1
Jody Morrisette	2
Scott Willett	1
Dave Hollingworth	1
Lester Chaput	2
Tim Noonis	3

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Jake Dusling		2
Fred Scoglia		1
Wade Durham		1
Ed Linkous		1
Brent Stubblefield		1
Glen Burlison		1
Kevin Burlison		1
Jesse Warrick		1
Carter Adams		1
Jason White		1
Charlie Womack		1
Shannon Davis		1
Scott Horrocks		1

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**Witness: Kevin Sprague
February 27, 2009**

Staff 1-28: Please provide a list of all transmission line outages that occurred during the December 2008 ice storm. Please be specific to line/circuit number, location, time of outage, cause and number of customers affected.

Response:

Unitil Energy Systems does not own or operate transmission lines.

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**Witness: Kevin Sprague
February 27, 2009**

Staff 1-31: Please provide for the years 2002–2008 the total number of transmission and sub-transmission circuit miles by voltage class (i.e., 345 kV, 115 kV, 69 kV or 34.5 kV).

Response:

Unitil Energy Systems (UES) does not own any transmission lines. All of the sub transmission system of UES is 34.5kV class and generally located in right-of-way.

The table below details the circuit miles of the sub transmission system at UES broken down by the two operating areas; UES Capital and UES Seacoast.

Year	Circuit Miles		
	UES Capital	UES Seacoast	Total
2002	104	207	311
2003	104	226	330
2004	104	226	330
2005	104	226	330
2006	104	226	330
2007	104	226	330
2008	104	226	330

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Staff 1-32: Please provide for the years 2002–2008 the amount expended on vegetation management and the circuit miles trimmed, broken down by transmission voltage class.

Response:

Sub-transmission vegetation management:

Year	Voltage class	Miles Trimmed	Expenditure
2002	34.5 kV	12.31	\$91,473
2003	34.5 kV	13.39	\$77,890
2004	34.5 kV	17.90	\$89,492
2005	34.5 kV	5.37 ¹	\$36,936
2006	34.5 kV	15.40	\$75,075
2007	34.5 kV	17.46	\$117,161
2008	34.5 kV	14.25	\$70,473

Distribution vegetation management

Year	Miles Trimmed	Expenditure
2002	142.7	\$527,318
2003	162.0	\$716,202
2004	148.6	\$675,468
2005	99.0	\$737,366
2006	83.1	\$695,953
2007	54.4	\$736,959
2008	57.3	\$707,817

In 2006, Unitil implemented a change to its vegetation management program that called for ground cutting of trees, increasing cost per section. In addition, traffic control requirements have significantly increased the cost of the program.

¹ In 2005, the contractor hired was unable to complete the required trimming miles per contract. Therefore miles trimmed and subsequent payments were artificially low in 2005. Payments and miles trimmed were later reported in 2007 data.

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Staff 1-33: Please provide best estimates by percentage of the number of trees or limbs that fell from outside rights of way and contacted electric facilities, causing an outage. Please break down those estimates by area work center and/or town.

Response:

Given the level of damage sustained as a result of multiple limbs, partial trees, and uprooted trees falling ~~into~~ onto the company's electric facilities, and that crews and other field personnel were concentrating their efforts on restoration rather than assessing the cause of the outages, this is impossible to estimate with any confidence. Based upon anecdotal discussions with crew members and damage assessment personnel, however, we believe that there were a significant number of such incidents throughout UES' service areas, with higher occurrences in the areas where there was greater ice accretion.

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Staff 1-34: Please provide best estimates by percentage of the number of trees or limbs that fell within rights of way but beyond vegetation management clearance zones that contacted electric facilities and caused an outage. Please break down by area work center and/or town.

Response:

[Please see the response to Staff 1-33.](#)

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Staff 1-35: Please provide by voltage class the number of poles and cross arms broken during the December 2008 ice storm. Please indicate location by area work center, town and circuit number.

Response:

During the 2008 ice storm, the intercompany operating procedures (IOPs) were temporarily suspended between Unitil and Fairpoint with regard to maintenance area and pole setting. In an effort to expedite pole sets, both companies set poles in each others designated maintenance areas. Please see Staff 1-35 Attachment 1 for detailed pole setting information.

Unitil Energy Systems Seacoast installed 210 crossarms during the December 2008 ice Storm. Detailed records regarding locations are unavailable.

Material Item	Quantity
CROSSARM 4PIN 5FT 7IN	29
CROSSARM 4PIN 9 FT	4
CROSSARM 4PIN 10 FT	6
CROSSARM 6PIN 8 FT	130
CROSSARM 8PIN 10FT	41

Unitil Energy Systems Capital installed 29 crossarms during the December 2008 ice Storm. Detailed records regarding locations are unavailable

Material Item	Quantity
CROSSARM 4PIN 5FT 7IN	2
CROSSARM 4PIN 10 FT	1
CROSSARM 6PIN 8 FT	22
CROSSARM 8PIN 10FT	4

UES Seacoast

Poles set by Unitil in Fairpoint Maintenance Area – 7 total

Town	Location	Pole Number	Voltage (kV)	Circuit Number
Atkinson	Academy Ave	1/13	13.8	21W1/2
Atkinson	Crown Hill Rd	17/2/52	8	13W1
Atkinson	Maple Ave	54/104	8	21W2
Hampton Falls	Crank Rd	6/24	2.4	59X1
Stratham	Heights Rd	112/13	13.8	11W1
Stratham	Tall Pines Dr	92/4/51	8	47X1
Kingston	Pheasant Lane	43/28	19.9	43X1

UES Seacoast

Poles set by Unitil in Unitil Maintenance Area – 32 total

Town	Location	Pole Number	Voltage (kV)	Circuit Number
East Kingston	Rt 107A	4/13	4	6W1
East Kingston	Rt 108	16/23	13.8	6W1
East Kingston	Rt 107	26	13.8	6W1
Exeter	Pickpocket Rd	148/4	2.4	43X1
Exeter	Pickpocket Rd	148/26	2.4	43X1
Exeter	Westside Dr	208/4	2.4	43X1
Exeter	Lantern Ave	115/2	2.4	19X2
Hampton	Highland St	120/5/1	2.4	3H1
Hampton	Ashbrook	11/3	2.4	20H1
Hampton	Moccasin Dr	182/2	2.4	17H1
Hampton	Langdale Dr	155/4	19.9	18X1
Newton	W. Main St	52/2	13.8	13W2
Newton	Meadowview Dr	20/12	2.4	13W2
Newton	Concannon Rd	31/4	8	13W2
Newton	Main St	19/80	8	13W2
Newton	Heath Rd	13/44	2.4	13W2
Newton	Bear Hill Rd	5/6	4	54X1
Newton	Bancroft Rd	2/5	2.4	54X1
South Hampton	Hilldale Ave	4/27/1	2.4	6W1
South Hampton	Main Ave	8/68	8	6W1
South Hampton	Hilldale Ave	4/40	2.4	6W1
South Hampton	Locust St	6/7	2.4	23X1
South Hampton	Locust St	6/8	2.4	23X1
Danville	Pine St	37/30	2.4	22X1

Town	Location	Pole Number	Voltage (kV)	Circuit Number
Newton	Maple Ave	18/6	4	54X1
Newton	Maple Ave	18/6/51	4	54X1
Newton	Maple Ave	18/7	4	54X1
Newton	Maple Ave	18/7/51	4	54X1
Newton	Webster Grove	55/6	4	13W2
Hampton	Locke Rd	163/1	4	2X2
Hampton	Timberswamp	262/21	34.5	18X1
Hampton	off Gale Rd.	N/A	34.5	3352

UES Capital

Poles set by Unutil in Unutil Maintenance Area – 3 total

Town	Location	Pole Number	Voltage (kV)	Circuit Number
Boscawen	Water Street	102	13.8	13W2
Bow	Putney Road	61	8	18W2
Bow	South Bow Road	4	8	18W2

UES Capital

Poles set by Unutil in Fairpoint Maintenance Area – 0 total